

REMARKS

Amendments

Amendments to the Claims

Applicant has amended the independent claims to more particularly point out what Applicant regards as the invention. In particular, Applicant has clarified that the sets of motion vectors define relationships between fields of the same parity. No new matter has been added as a result of these amendments; support may be found in the Specification, *intra alia*, at paragraphs 45-54 that describe Figure 1. Furthermore, Applicant has amended dependent claims to remove redundant language, and to correct certain typographical errors and instances of improper antecedent basis.

Rejections

Rejections under 35 U.S.C. § 102

Claims 1-3 and 18

Claims 1-3 and 18 stand rejected under 35 U.S.C. §102(e) over U.S. Patent 6,058,140 to Smolenski. Applicant notes that Smolenski is properly classified as prior art under 35 U.S.C. § 102(a) because it issued before the present application was filed but less than one year before Applicant's effective filing date. Applicant respectfully submits that Smolenski does not teach or suggest each and every limitation of the invention as claimed in claims 1-3 and 18.

Smolenski discloses an encoder detects redundant video fields using motion vectors for adjacent video fields. The adjacent fields are a first (top) field and a second (bottom) field of one frame, or the second (bottom) field of one frame and the first (top) field of the next frame (*see* Figure 2). Smolenski identifies a repeated field as one with small motion vectors.

It is common in the art to refer to the top (or bottom) fields of two different frames as having the same polarity, while a top field of one frame and a bottom field of a different frame are referred to as having opposite polarity. Similarly, the top and bottom fields of the same frame have opposite polarity. Thus, Smolenski's uses motion vectors from fields of opposite polarity to determine redundant video fields. In contrast,

Applicant's invention as claimed in independent claims 1 and 18 compares motion vectors from fields of the same polarity to determine redundancy.

Furthermore, Applicant claims that a ratio between the first and second set of vectors is compared to a threshold. There is no teaching or suggestion in Smolenski of using ratios to determine repeated fields.

Accordingly, Smolenski cannot be properly interpreted as anticipating Applicant's invention as claimed in claims 1-3 and claim 18, and Applicant respectfully requests the withdrawal of the rejection of the claims under 35 U.S.C. § 102(a) over Smolenski.

Rejections under 35 U.S.C. § 103

Claims 8-13 and 19

Claims 8-13 and 19 stand rejected under 35 U.S.C. § 103(a) over the combination of Smolenski and U.S. Patent 6,041,142 to Rao et al. Applicant respectfully submits that the combination is improper and further does not teach or suggest each and every limitation of the invention claimed in claims 8-13 and 19.

Rao discloses detecting of redundant data fields in a video stream uses field activity (FA) and strip activity (SA) of two successive fields of the same parity [Rao: col. 25, lines 14-29]. Each field is horizontally divided into a pre-determined number of strips. SA is a cumulative difference measure for a strip while FA is a cumulative difference measure for a field. [col. 16, lines 26-57] The FA is compared with a first threshold T_n and the SA is compared with a second threshold T_m . The combination of the first and second thresholds is referred to as the "primary criteria." If FA and SA of the two fields satisfies the primary criteria, the fields are not redundant. [col. 29, lines 22-51]

Applicant respectfully submits that the combination is improperly motivated because the references teach away from the combination [MPEP 2145 X.D.2] Because Smolenski uses opposite parity fields and Rao uses same parity fields to detect redundant fields, the references actually contradict each other. Furthermore, the Examiner has provided no clear reasoning as why one of skill in the art would expect to successfully combine the conflicting teachings of Smolenski and Rao [MPEP 2140.01]. Accordingly, the combination of Smolenski and Rao is improper.

Assuming, *arguendo*, that the combination of Smolenski and Rao could be considered proper, the combination does not teach Applicant's claimed limitations in claims 8-13 and 19. Independent claim 11 claims comparing ratios of two sets of motion vectors to a threshold to identify a repeated field. Claims 8-10 and 19 depend from independent claims 1 and 18, respectively, which contain a similar limitation. Because Smolenski does not disclose the use of a ratio as claimed, Rao must teach or suggest the limitation to have a proper *prima facie* case of obviousness. However, Rao discloses comparing cumulative difference measurements FA and SA to two different threshold. Rao does not teach or suggest that either FA or SA are ratios between two sets of motion vectors and therefore cannot be properly interpreted as disclosing the use of a ratio as claimed. Moreover, Rao states that the use of both FA and SA, and thus the two different thresholds, increases the likelihood of correctly identifying redundant fields [col. 25, lines 14-29]. Applicant respectfully reminds the Examiner that the retention of a element from the prior art in a claim while retaining its function is indicia of non-obviousness [MPEP 2144.04 II B]

Furthermore, with regard to claims 9, 12 and 19, the Examiner asserted that Rao discloses Applicant's claimed limitation of replacing a repeated field with a reference to a field from which the repeated field is repeated. However, Rao discloses that a repeated field is replaced with another field but does not teach or suggest that the repeated field is replaced with a *reference* to another field as claimed.

Accordingly, Applicant respectfully requests the withdrawal of the rejection of claims 8-13 and 19 under 35 U.S.C. § 103(a) over the combination of Smolenski and Rao.

New Claims

Claims 24-27 have been added to claim the subject matter of claims 1-7 and 9-10 under 35 U.S.C. § 112, ¶6. Applicant respectfully submits that claims 24-27 are allowable for at least the same reasons claims 1-7 and 9-10 are allowable.

Allowable Subject Matter

Applicant thanks the Examiner for indicating that claims 4-7, 14-17 and 20-23 contain allowable subject matter if rewritten to include all the limitations of the intervening claims. Because Applicant believes all the pending claims are allowable for the reasons set forth above, Applicant has not so amended claims 4-7, 14-17 and 20-23 in the present response.

SUMMARY

Claims 1-27 are currently pending. In view of the foregoing amendments and remarks, Applicant respectfully submits that the pending claims are in condition for allowance. Applicant respectfully requests reconsideration of the application and allowance of the pending claims.

If the Examiner determines the prompt allowance of these claims could be facilitated by a telephone conference, the Examiner is invited to contact Sue Holloway at (408) 720-8300 x309.


Deposit Account Authorization

Authorization is hereby given to charge our Deposit Account No. 02-2666 for any charges that may be due. Furthermore, if an extension is required, then Applicant hereby requests such extension.

Respectfully submitted,

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